European Journal of Information Systems (2005) 14, 500–503

www.palgrave-journals.com/ejis

Let's be baroque!

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European Journal of Information Systems **(2005) 14,** 500–503.
doi:10.1057/palgrave.ejis.3000558

Received: 5 August 2005
Revised: 24 September 2005
Accepted: 28 September 2005

What happens if we abandon thinking about information systems (IS) in terms of fixed prescriptions or scientific models? What happens if we leave behind order, simplicity, sequence, and linearity, and in turn, embrace the sensuous, dramatic, vital, messy, and emotional? What a project for IT researchers!

In this brief reflection, I share my first encounter with Claudio Ciborra and my reading of his article *Crisis and foundations: an inquiry into the nature and limits of models and methods in the information systems discipline* (1998), a favorite paper of mine, pivotal to my doctoral work carried out in 2000–2003 (Henriksen/Strand, 2003) and new projects in the making.

Experiencing a dead end in IS

As a young researcher, I attended the *23rd Information Research Seminar in Scandinavia* (IRIS) in Uddevalla, Sweden 2000. I was presenting my very first conference paper (mainly a project description) and full of curiosity and zest for engaging in this new life of academia. My project was located in a wider interdisciplinary research program on web-technology for collaborative work (www.diwa.dk) looking at how web-technologies might be changing practices of development and design and affecting developers' use or non-use of systems development methods. Coming from a background in anthropology and science and technology studies (STS) and just starting up research in a department of computer science, IRIS seemed to match my own abandonment of disciplinary boundaries working in the muddled area of information technology design, use, and management from a plethora of perspectives.

At the IRIS conference, I attended a workshop on *The future of systems development methods* – a relevant theme in relation to the impact of web-technologies upon the world of IS development. Discussions went back and forth as to whether one needs methods at all, what good they really do, how they might be improved, or alternately, what kind of educational framework (or theory?) might take the place of methods as the way of teaching and learning systems development. At one point, a man whom I later recognized as Claudio Ciborra stood up and gave a short, concise, and very provocative little speech. I cannot recall the exact wording, but his point (and the direction his argument subsequently thrust me into) was merely: 'This is a dead end, my friends': instead of sitting around here spending our time and intellectual capacity discussing whether or not, how, when, where methods do what, we should be out there studying what actually is going on: how IS actually come to work, and what practices are actually involved. People listened and some opposed.

For me, Ciborra's call hit home and provided a framework for the perspective I was trying to communicate to researchers who were not necessarily interested in what I felt I had to offer. Ciborra's comments at this panel discussion, (as well as in a later keynote at the conference, where he wrote strange words like Xenia, Krisis, Kairos on the board behind him) gave me courage to carry through with a project on systems development that deliberately circumvents a methods discussion. This meeting and later conversations led me to Ciborra's paper, *Crisis and foundations: an inquiry into the nature and limits of models and methods in the information systems discipline* (1998), which I then used to position and focus my doctoral

research. I will look back on this text and then return to my own project and to some future challenges that follow for IT researchers.

Bracketing everything we know?!

Ciborra's crisis-paper is seminal in the way that Ciborra presents the sharpest of critiques of IS research and puts forward some radical suggestions for what an alternative path of inquiry might look like for this field of research – which according to Ciborra is on a long and tedious detour with all this talk of methods, models, and strategy. Ciborra advocates, slightly provocatively, that we start by bracketing everything we know. Let's set aside what we know and start afresh.

As in his striking panel commentary, Ciborra starts his article by unpacking how systems analysis and design methodologies have dominated teaching and research: 'The core, if not the identity of our discipline, has been revolving around such methodologies, or… around the very idea of ''method''' (Ciborra 1998, p. 6). Yet, despite the proliferation of IS methodologies, projects and plans often diverge from or fail to live up to their promises. And this excess, the organizational experimentation, tinkering activities, and the fine-tuning of IT that takes place *in* organizational settings of use might be the productive divergences that actually make things work. In this paper, Ciborra traces out how most strategic applications of IT in organizations largely came about before any methodical article or textbook described it. He looks back to how the Internet's success grew out of horizontal networking practices, incrementally and without any master plan, and points out that these real-life success stories do not really have anything to do with academia (still arguing about methods and models). What we think of as successful technological innovations and revelations have mainly grown out of organizational practice, not academic practice. Ciborra suggests that this very preoccupation with neat and orderly maps, models, and figures is a dead end for the IS discipline.

To get out of this frying pan, Ciborra suggests we bracket what we know and 'go back to the world of practice' to find new foundations and develop a new style of IS teaching and research (p. 5). Ciborra draws on phenomenology, in particular Husserl (1970), to find a possible path out. He advocates returning to dilemmas that have been forgotten, obscured and marginalized by our preoccupation with method and models: *practice*. For Ciborra, the 'forgetting' of practice and the very issues at stake are precisely what keeps the wheels turning: He notes that by systematically forgetting the crisis, IS researchers can 'live with success in a sort of business-as-usual fashion' (Ciborra, 1998, p. 7). We can keep meeting at conferences and discuss basically the same problems and keep informing developers and managers in the same old terms.

For Ciborra (and previously for Husserl) the core of this crisis comes out of a separation of practice from the domain of science – the thorough and systematic forgetting of the role of messy mundane everyday life activities that make and maintain any methodology, information system, or organization. The IS discipline has adopted a scientific way of doing research that privileges methods and models (the universal order) over practice (the particular instantiations) and thereby obscures the messy hybrid nature of our very subject matter. This scientism constitutes the authority of researchers and becomes a lifesaver that we hold on to when working in this conglomerate of disciplines and epistemologies. A scientific paradigm has largely been taken over as *the way* of understanding and improving upon IS. With this way follows ideals of providing order, explanation, and predictability, and objectives of uncovering essential laws of causality. Ciborra notes that a widespread critique of this paradigm is at work and a growing body of richer practice-oriented case studies exist (e.g., Ciborra, 2000a, b). Yet, Ciborra finds that this work continues to have a very marginal place in most educational programs and IS research arenas. And more often than not, these studies tend to adopt and mimic a scientific way of working, by relying on and striving for abstract representations, for example simple geometrical figures and causal arrows that map and overview practice. Ciborra notes the irony of working with and within the very tools under critique: 'for example, that in order to show that structured methodologies are a failure or plainly not used, one has to adopt a structured scientific method to measure empirically the phenomenon, otherwise one remains neither credible nor legitimate…the preoccupation with method is present even when we question the efficacy of methodologies' (p. 8).

What can we do to circumvent this labyrinth of dead-ends? Ciborra suggests that we refocus on practice and rework theory to be more attuned with divergence, experimentation, networking and other characteristics of real life socio-technical practices.

Inversion

Inversion is the tendency over time to mistake abstractions and representations for reality and forget the everyday practice that forms, uses, and sustains the relevance of these abstractions (p. 9). Ciborra suggests that ideal representations tend to 'materialize', and we come to see organizations and information systems in terms of boxes and causal arrows. These ideal representations become maps with which developers, managers, and researchers themselves, venture out into the world. And as they are used and refined, these maps slip into a status of being more real and that to which the real world has to conform. We subtly shift into granting ideal entities (models and methods) essence and existence, and 'such pure idealities come to be seen as the way nature really is in itself requiring ''discovery''' (p. 9). This inversion over time obscures the practice grounds, the messiness, and situated character of any activity, and in turn, ideal representations gain increasing value through a kind of self-reinforcing effect.

To refocus on practice, Ciborra suggests looking and listening closely to how people deal with everyday life, the puzzles and riddles it poses. Listening closely entails suspending what we know about strategy, structure, process, data, stages, or system and persistently avoiding attaching any particular relevance when these words come up. Ciborra suggests that we move out into the world, and start really observing while openly reflecting upon that which we observe. Such kinds of 'naïve' studies of implementation and management practices have, for example, brought forward a striking lack of leadership in IS projects and a drifting of technology, 'as if out of control' (p. 13). '… plans keep being diverted, surprises arise constantly, and opportunistic adjustments must be carried out on the spur of the moment, so that planning is espoused while circumstances compel managers to improvise. The implementation of the technology, too, is punctuated by unexpected outcomes and turns that require frequent adaptations if not re-inventions of the initial system' (p. 13).

The studies in *From Control to Drift* (Ciborra, 2000b) are good cases in point. New discoveries become available for us if we can step out of the harnesses of orderly methods and models. To follow through on understanding the life of technology a new vocabulary becomes pertinent.

A warmer vocabulary

By attending closely to practice, Ciborra has shown us that IS emerge through processes of caretaking, hospitality, and cultivation. These are 'warmer' terms, more sensuous and emotional, and about people living with technology, in everyday life. *Caretaking*, for example, helps us to think about how systems are granted ownership, nurtured and in time perhaps become so familiar and taken for granted that they disappear. *Hospitality* refers to the extra effort involved in coping, accepting, and embedding new technologies into work practices. This kind of activity cannot be represented geometrically: '…it is made of absorbed coping, care, being there amidst ambiguity, intimacy, sporting hospitality as well as tamed hostility towards what the new and unknown is unveiling' (p. 14). Lastly, *cultivation*, an agricultural metaphor, brings out how an IS is dynamic and growing through a life of its own (Dahlbom & Janlert, 1996, p. 14). Development then becomes helping this growth along, nurturing and sustaining it more than the locus of innovation and creation (as in methods thinking).

This vocabulary and attentiveness to the emotional aspects of practice opens for a completely different line of inquiry for IS: How do successful (or just semi-successful) technologies come to be? How are technologies coped with and welcomed? How can existing technologies be cultivated over time? And how can new systems build upon that which already exists and has life?

Such questions have sparked a range of interesting studies in IS and have made relevant new analytical resources such as STS in thinking about development and use practices and how these evolve over time (e.g. Ciborra, 2000b). Ciborra's work has encouraged me to turn a critical eye to the taken-for-granted aspects of IS and pushed my work towards new kinds of questioning and thinking. Although the messiness of IS practices might make us uncomfortable and uneasy (what to do with it if not order and control it?), we should address it head on and without panicking.

Information systems as a distributed and emergent phenomenon

Rather than present additional suggestions and overviews of how systems development can and should be carried out, I have in my own work taken an offset in an open, descriptive, and empirical approach, inspired by Ciborra and STS. Instead of providing further explanations for why things do not go as planned, I have asked in a more open-ended and exploratory manner questions such as: How does an IS in an organization come to work at all? What practices can be identified as playing a part in such a process? How are complications of particular systems development process handled by the actors involved?

These questions have been answered through a study of a systems development initiative, a web-based system for collaborative work, in a multinational pharmaceutical company and an affiliated development company (Henriksen/Strand, 2003). The study brings forward a way of thinking about systems development that precisely seeks to foreground some of the fragmented and inconsistent aspects of development that tend to be overlooked in studies that seek to relate findings to a universalized method. The study unpacks a productive mess of ongoing development by looking to those involved (designers, managers and various types of users) and how they act and cope on a daily basis. For example, how professional developers not only construct the material technical bits and pieces of computer systems, but also how they frame these discursively in trying to deal with the many uncertainties and considerations they face; how users do not merely comply with or resist a finished computer system, but take active part in assembling the system with other technologies and with their work practices to make the system work. Through this ongoing practical activity, use evolves, and the functionalities of the system are extended. I have also included analyses of my own research situations and of those of my colleagues. These examinations illustrate how we do not observe, analyze, then intervene as single separate events, but seem to interfere in unanticipated ways throughout the research process, in this way, adding to shifts and drift in the life of the system.

This research makes available empirical material that may push our way of thinking about what is going on or rework our notion of where 'the action is'. The study suggests that development might be rethought of as a process that temporally and spatially overflows the notion of a project with a beginning and end, and as one that is not easily contained within the boundaries

of a model and an overview. A new view appears of development as an ongoing process where adjustments are continually made along the way by developers, managers, and the users through parallel practices taking place at distributed and partially connected locations. The study foregrounds activities outside of the professional domain of development as important and as productive resources. And it is my hope that the empirical material made available can assist researchers and developers in thinking about development as (1) an emergent process, something ongoing that continually evolves and never quite finishes, and as (2) distributed processes, something going on in many places at once, that may be more and sometimes less integrated and connected. Again, this work resonates Ciborra's views.

Being critical and informing

Being critical and making new empirical material available can be seen as another way of extending and informing the field and practice of systems development. There has been quite a bit of discussion as to what extent conceptual elaborations and critical perspectives really help developers and managers with the task of making better technology, whether good IS research is and should be more applied and provide relevant and tangible results – such as building systems that work here and now or providing concrete suggestions as to what should be done. I have, for example, more than once been confronted with the terrifying 'so what?' question. So how do these empirical and critical perspectives help us to move forward with the job of making better systems? At a first glance they do not. My work, as well as Ciborra's, provides no final indication of (or method for) precisely what to do with the mess once we commence this engagement. Furthermore, once we do succeed in taking seriously these complicated aspects of IS, then the new vocabulary that follows such as care taking, hospitality, cultivation (Ciborra, 2000a) or emergence, distribution and fragmentation (Henriksen/Strand, 2003) does not easily attach to the busy lives of IT developers, managers, and consultants – who to some extent demand the simple overviews, a few bullet points or some methodical prescriptions in order to get on with the job here and now.

Yet, on the other hand, such disorderly and critical perspectives may point us toward other ways of thinking about contemporary IS. They can assist us in questioning again and again what kind of socio-technical worlds we want to succeed in creating through our research. And this is exactly what Ciborra's person and writing has encouraged me to do. I have followed Ciborra in assuming a critical and circumspect attitude rather than continuing in a business-as-usual manner. I have done this by persistently asking what in the world it means to inform and improve ISD, and I have looked for alternative paths for coming to terms with the very question of improvement in contemporary complexes of IS development, use, and management. I warmly encourage others to do so (and reread the crisis-paper while you are at it!) because the million-dollar question for the future is how we can improve upon IS in other ways than through simplifying and controlling.

About the author

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